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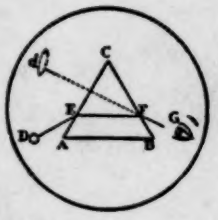

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PREFACE

As Editor of the *Journal of the Optical Society of America* it has been my good fortune and pleasure to have as Assistant Editor, Miss Mary E. Corning who has carried much of the editorial and indexing burden. Her excellent background in Chemistry and Physics gained at Connecticut College and Mount Holyoke, and supplemented by technical work as a physical chemist at the National Bureau of Standards, has provided ample resources to accept the editorial responsibility of putting together this 40 volume cumulative index of the *Journal of the Optical Society of America*.

As one who has been raised in part on *Chemical Abstracts*, it has been the feeling of the Editor, which has been shared by his Assistant Editor, that to provide the most useful index there should be an analytical breakdown of material rather than selection of a few broad titles and alphabetically arranging the titles of papers under those headings, according to the first word of the title or perhaps by date of publication. The acceptance and favorable response in the application of this analytical type of index to the annual indices of the *Journal of the Optical Society of America* in the past four years leads us to feel that this form will be much more useful than the older type which requires reading all titles and guessing as to whether the title really conveyed the content of the paper.

A recent cumulative index of one of the major technical journals of this country notes in its foreword that its index has been designed so that the "guiding principle in the listing of an article is placement under a heading to which readers who know the article and its contents will turn." It is our feeling that those who know the article and its contents may not need to use the index and that the prime user will be the scientist who does not know of the existence of the article. We have chosen an analytical breakdown in such a form and degree as to enable the user to arrive at one or more references relative to a specific subject. Readers may feel that omission of author citation in the subject index, as well as titles of articles, will limit reader use. To include such items would make the subject index too cumbersome. It is our feeling that information relative to any author is amply covered in the author index.

In order that this cumulative index be as precise as possible, it has been necessary to go back to the original articles in all cases in preparing this index and to use only experienced scientists in the preparation of the index.

The problem of an authors' index has been difficult. It would seem simple enough if every paper were authored by a single author but the "share the credit" system of our technical writers, tied together with an order of priority in some papers, alphabetized arrangement in others and in order or reverse order of rank or position, makes it difficult to select a simple method of presentation. We have included in the authors' index all papers of each author in the order of date of publication and with the authors' names in the order as they appear in the printed paper.

We were particularly fortunate to have the services and advice of William F. Meggers, past president of the *Optical Society of America*, and for 40 years an abstractor for *Chemical Abstracts*. Julia Appleton Metcalf has previously worked on editorial indexing with the editor in preparation of his books and manuscripts. Isadore Nimeroff of the National Bureau of Standards completed the editorial team who, together with Mary Corning and the Editor have combined to produce this cumulative index.

Recognition should be made of a previous *Cumulative Index* of the *Journal of the Optical Society of America* which was published in 1936 and which covered Volumes 1 to 25 (1917 to 1935). This earlier cumulative index was prepared by F. K. Richtmyer who was then the Editor of the *Journal of the Optical Society of America*. This index was prepared in the then accepted procedure of listing all articles in chronological order by title under major scientific breakdown. For a limited number of entries such indexing may prove satisfactory but with the increase in size of the Journal the 15 years following this index has resulted in a much larger number of articles than in the previous 25 years. It was decided that the extra work required to index the first 25 years along with the next 15 would be well worth the effort. By the use of a detailed analytical index it is felt that a more useful reference index has been produced.

In his foreword Dr. Richtmyer noted the history of the *Journal of the Optical Society* up to the time of the Cumulative index in 1935.

> "The first issue of the *Journal of the Optical Society of America* appeared in January, 1917, under the editorship of the late Dr. G. A. Hermann Kellner. The regular schedule of publication was interrupted during the war, so that Volumes 1, 2 and 3 (1917–1919) comprise only six numbers.
>
> "Late in 1919, the editorial staff was reorganized and beginning with January, 1920, the Journal was issued bimonthly under the editorship of Dr. Paul D. Foote. Upon the resignation of Dr. Foote in 1932, the undersigned (F. R. Richtmyer) became Editor.
>
> "In 1922, in collaboration with the Scientific Apparatus Makers of America and with the assistance of the National Research Council, a section on scientific instruments was added, the combined journal, issued monthly, being known as the *Journal of the Optical Society of America* and *Review of Scientific Instruments*. This combination continued until January, 1930, when the section on scientific instruments was published by the Optical Society as a separate journal with the title *The Review of Scientific Instruments*."

In preparing this 40 volume cumulative index the section on Review of Scientific Instruments has been included for the period 1922 to 1930. After the combination of the Optical Society of America with other Physical Societies to form the American Institute of Physics the Optical Society allowed the American Institute of Physics to publish the *Review of Scientific Instruments*.

Dean George R. Harrison was appointed the Editor of the *Journal of the Optical Society of America* in 1940, following the untimely death of Prof. Richtmyer.

Dean Harrison had been conducting, for some time prior to his appointment as Editor, a summer conference on Applied Spectroscopy which had achieved international prominence. In 1939 this summer conference decided to form a Society of Applied Spectroscopy and establish a *Journal of Applied Spectroscopy*. Officers were elected, including Dean Harrison as Editor of the *Journal of Applied Spectroscopy*. Before the *Journal of Applied Spectroscopy* could be formally published Dean Harrison was requested to assume the Editorship of the *Journal of the Optical Society of America* and it was quite reasonable that the suggestion was made that the *Journal of the Optical Society of America* could be properly enlarged to supply effectively the needs of the applied spectroscopists.

Dean Harrison enlarged the Editorial Board to include a number of applied spectroscopists and through an effective membership campaign conducted by the Secretary, Arthur C. Hardy, there was a distinct membership increase which has permitted the Journal to publish many more papers and to have a much greater distribution in both Optical and Spectroscopy areas.

Dean Harrison served as Editor for a ten-year period, from 1940 to 1949, which included the war years in which he carried important national defense responsibilities in addition to maintaining an improved and expanded *Journal of the Optical Society of America*.

In 1950 Wallace R. Brode was appointed by the Board of Directors as Editor of the *Journal of the Optical Society of America*. On his recommendation the Board of Directors authorized the preparation of a cumulative index, in line with indices which were under consideration by other American Institute of Physics journals.

The cumulative index project has been made possible through a grant from the *Office of Naval Research—Contract NONR-455(00)*, for which we wish to express our appreciation.

November 1954

WALLACE R. BRODE,
Editor

Author Index

References with (A) are abstracts of papers presented at meetings of the Optical Society of America; (T) papers presented by title only; (L) Indicates letters to the Editor. Volume numbers are given in bold face, pages in regular type and years in parentheses, i.e. **40**, 832 (1950).

It will be noted that there are no references to "see someone else" in the Author Index. Although it has meant a little duplication, there has been included under each author all articles in which he was author or co-author. All articles in which the author has participated are arranged in the chronological order of publication so that a proper bibliography with author names arranged as in the original article is obtained by insertion of the author's name in the indicated (——) space under each indexed name. Although not strictly an authored article, we have included Book Reviews both under the book author as well as the reviewer. (See also Book Reviews under the Subject Index.)

Abbe, Ernst. *Die Enstehung des Glaswerks von Schott & Gen:* Fourth volume, first half (Book). Reviewed by I. C. Gardner—**20**, 86 (1930)

Abbot, C. G.

—— Apparatus and results of solar radiation work—**7**, 61 (1923)

—— *The Earth and the Stars* (Book). Reviewed by F. K. Richtmyer—**13**, 222 (1926)

—— Radiometric stellar energy spectra—**17**, 22(T) (1928)

—— Radiometric stellar energy spectra—**18**, 168(A) (1929)

—— Measuring energy with blackened receivers—**24**, 159(T) (1934)

Abbott, R. B. Period of a loaded conical jolly balance spring —**17**, 318 (1928)

Aborn, Robert H., George L. Clark, and Elmer W. Brugmann. A new multiple x-ray spectrograph combining the powder diffraction and monochromatic pinhole methods—**12**, 379 (1926)

Adams, E. P. *The Quantum Theory* (Book). Reviewed by J. H. Van Vleck—**9**, 401 (1924)

Adams, Elliot Q.

—— A comparison of the Fechner and Munsell scales of luminous sensation value—**6**, 932 (1922)

—— A theory of color vision—**7**, 66 (1923)

—— A comparison of the Fechner and Munsell scales of luminous sensation value—**7**, 70 (1923)

—— A general utility reading-lens for burettes and thermometers—**12**, 375 (1926)

——, **B. T. Barnes, and W. E. Forsythe.** Erythema due to ultraviolet radiation—**21**, 207, 530 (Erratum) (1931)

—— An analysis of Hausser and Vahle's Data on erythema—**21**, 440(A) (1931)

B. T. Barnes, ——, and W. E. Forsythe. Total emissivity of various materials—**30**, 269(A) (1940)

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—— Mercury arc lamps—**33**, 174(L) (1943)

—— Chromatic valence as a correlate of Munsell chroma —**33**, 683(A) (1943)

W. E. Forsythe and ——. Radiating characteristics of tungsten and tungsten lamps—**35**, 306 (1945)

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—— Developments of the concept of chromatic value— **36**, 717(A) (1946)

W. E. Forsythe, ——, and B. T. Barnes. Radiation sources for photoelectric radiometry—**36**, 720(A) (1946)

—— Table of logarithmic corrections to the Wein radiation law—**37**, 695 (1947)

B. T. Barnes, W. E. Forsythe, and ——. Total emissivity of various materials at 100–500°C—**37**, 804 (1947)

B. T. Barnes, W. E. Forsythe, and ——. Power losses from heated objects in still air—**37**, 808 (1947)

Adams, John Mead. Time measuring by commercial alternating current with controlled frequency—**19**, 384 (1929)

Adams, Kenneth B.

Keivin Burns, ——, and Jean Longwell. Interference measurements in the spectra of neon and natural mercury—**40**, 339 (1950)

Adams, Leason H.

—— **and E. D. Williamson.** A note on the annealing of optical glass—**4**, 213 (1920)

—— Thermostats for very high temperatures—**9**, 599 (1924)

Adcock, W. A.

D. F. Hornig, G. E. Hyde and ——. Ratio-recording double-beam infrared spectrophotometer with automatic slit-control—**40**, 497 (1950)

Adel, Arthur

—— Absorption line-width in the rotation spectrum of atmospheric water vapor—**37**, 516(A) (1947)

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Agnew, J. T.

——, **R. G. Franklin, R. E. Benn, and A. Bazarian.** Combustion studies with the orthicon spectrograph— **39**, 409(L) (1949)

Aicher, J. O. Measurement of 1849A radiation by afterglow of manganese-activated calcium silicate—**40**, 805(A) (1950)

Aiken, Charles Bayne

—— The alteration of resistance, inductance, and capacity by means of resistance coupled amplifiers—**15**, 85 (1927)

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Ainsworth, George. New lighting technique. Spacialite—**34**, 350(A) (1944)

Aklin, G. H. Effect of high index glasses on the field characteristics of photographic objectives—**38**, 841 (1948)

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—— A vacuum arc—**19**, 146 (1929)

—— **and H. V. Knorr.** Recording photoelectric spectroradiometer—**28**, 121 (1938)

Albertson, Walter E.
George R. Harrion, ——, and Norman F. Hosford. Zeeman effect data and further classification of the first spark spectrum of cerium—Ce II—**31**, 439 (1941)
Alderman, G. W.
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Allen, A. J.
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—— **and R. G. Franklin.** Hydrogen arc for absorption spectroscopy—**29**, 453 (1939); **30**, 91(A) (1940)
—— Hydrogen arc of high intensity for continuous ultraviolet radiation—**31**, 268 (1941)
Allen, Frank
—— On reflex visual sensations—**7**, 61(A)/583 (1923)
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—— The variation of visual reflex action with intensity of stimulation—**13**, 383 (1926)
——, **D. C. Archibald, and R. A. Lind.** The coordination of normal and abnormal color vision—**18**, 1 (1929)
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——, **Kenneth N. Ogle, and Gordon H. Gliddon.** Corresponding retinal points, the horopter and size and shape of ocular images, Part I—**22**, 538, Part II—575 (1932)
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—— Necrology of Francis G. Pease—**29**, 306 (1939)
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—— **and Lester F. Bird.** A quartz mercury arc with electrodes of low work function—**27**, 61(A)/95 (1937)
—— Ultraviolet irradiation by means of linear high pressure mercury lamps—**31**, 757(A) (1941; **32**, 121 (1942)
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—— **and Evans Vaughan.** Photodissociation of organic molecules, one or more bonds at a time—**32**, 634(A) (1942)
—— **and Rosa Kohls Conlon.** Ultraviolet absorption by the sulfonamides and their inhibitor, *para*-aminobenzoic acid—**33**, 689(A) (1943)
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Key to Index use.

1. Subjects, not titles, have been indexed.
2. Contents of papers (and abstracts of papers presented at meetings) have been indexed rather than a word breakdown of the title.
3. Principal subjects are given in boldface type. Cross-referenced subjects which should be consulted for a more thorough coverage are given in italics after the principal subject.
4. Volume numbers are given in bold face, pages in regular type and years in parentheses, i.e. **40**: 832 (1950).
5. (A), (L), (B), (P), (N), (O), etc., indicate (A) Abstracts of meeting papers; (L) Letters to the Editor; (B) Book Reviews; (P) Personalia; (N) Notes; (O) Obituaries. In the case of abstracts of meeting papers, since several abstracts appear on the same page and often on the same or similar subject, the abstract number is also given. If the paper covered by the abstract has been submitted and published in the same year as the abstract, this has been indicated by a solidus (/) between the abstract notation and the Journal page of the full article, i.e. 264(A*67*)/589 indicates that the paper described in abstract No. 67 on page 264 has been published in full on page 589.
6. Subjects have been indexed in subdivisions according to key words with prepositions such as "on," "in," "of," "with," etc., included where essential for euphonious interpretation, but not affecting the alphabetical arrangement of the principal subject. In many cases, where obvious, these prepositions have been omitted.

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